AMENDMENTS TO THE SPECIFICATION:

Please amend the heading beginning at page 5, line 15, as follows:

SUMMARY ~~OF THE INVENTION~~

Please amend the paragraph beginning at page 5, line 20, as follows:

It is a general object ~~of the present invention~~ to provide an efficient mechanism for forwarding information in a multi-hop network.

Please amend the paragraph beginning at page 5, line 23, as follows:

It is another object ~~of the invention~~ to provide a multi-hop routing scheme that exploits the received energy in a packet radio network in a more optimal manner.

Please amend the paragraph beginning at page 5, line 26, as follows:

Yet another object ~~of the invention~~ is to improve the performance of a multi-hop network with regard to throughput, delay characteristics and/or power consumption.

Please amend the paragraph beginning at page 5, line 29, as follows:

It is an object ~~of the invention~~ to improve Quality of Service (QoS) support in the network.

Please amend the paragraph beginning at page 6, line 1, as follows:

It is also an object ~~of the invention~~ to reduce the risk of congestion and buffer overflow.

Please amend the paragraph beginning at page 6, line 3, as follows:

It is a particular object ~~of the invention~~ to provide a method and system for efficient forwarding of information in a multi-hop network.

Please delete the paragraph beginning at page 6, line9, which starts with:

These and other objects...

Please amend the paragraph beginning at page 6, line 12, as follows:

The inventors have recognized that although opportune routing and selection diversity forwarding each constitutes a significant improvement compared to traditional routing, ~~none of these state-of-the-art~~ multi-hop/routing schemes ~~exploits~~ do not exploit the received energy in a fully optimal manner, which implies that there is a potential for improvement with regard to throughput and delay characteristics as well as power consumption.

Please amend the paragraphs beginning at page 6, lines 18 and 23, as follows:

The ~~invention~~ technology described here is primarily based on a powerful combination of contention-based forwarding and multi-user detection (MUD) at the receiver side in a multi-hop network such as a packet radio multi-hop network, efficiently incorporating and exploiting the ~~design choice~~ of MUD. ~~A basic idea is to employ~~ MUD is employed at the receiver side to concurrently decode multiple packets initially transmitted from multiple nodes, and prioritize among the correctly decoded packets to select one or more packets suitable for forwarding, and

finally reply with a packet acknowledgement for each selected packet. In this way, the design choice of MUD is exploited in the forwarding procedure.

Please amend the paragraph beginning at page 8, line 16, as follows:

The ~~technology~~ invention offers the following advantages:

Please amend the paragraph beginning at page 9, line 1, as follows:

Other advantages offered by the present invention will be appreciated upon reading of the below description ~~of the embodiments of the invention~~.

Please delete the paragraph beginning at page 9, line 6, which starts with:

The invention, together with…

Please amend the paragraph beginning at page 9, line 10, as follows:

Fig. 1 is a schematic process flow diagram illustrating actions and signaling in relation to multiple transmitting nodes and a receiving node according to a first preferred example embodiment ~~of the invention~~;

Please amend the paragraph beginning at page 9, line 17, as follows:

Fig. 3 is a schematic process flow diagram illustrating actions and signaling in relation to multiple transmitting nodes and a receiving node according to a second preferred example embodiment ~~of the invention~~;

Please amend the paragraph beginning at page 9, line 21, as follows:

Fig. 4 is a schematic process flow diagram illustrating actions and signaling in relation to multiple transmitting nodes and multiple relay candidate nodes according to a third example preferred embodiment ~~of the invention~~;

Please amend the paragraph beginning at page 9, line 28, as follows:

Fig. 6 is a schematic diagram of transmitting nodes and receiving nodes illustrating the effective forwarding result after prioritizations and corresponding forwarding orders according to an example ~~of the invention~~;

Please amend the paragraph beginning at page 10, line 1 as follows:

Fig. 7 is a schematic block diagram of relevant parts on the receiver side according to an ~~exemplary~~ example embodiment ~~of the invention~~; and

Please amend the paragraph beginning at page 10, line 4, as follows:

Fig. 8 is a schematic block diagram of relevant parts on the transmitter side according to an ~~exemplary~~ example embodiment ~~of the invention~~.

Please amend the heading beginning at page 10, line 7, as follows:

DETAILED DESCRIPTION ~~OF EMBODIMENTS OF THE INVENTION~~

Please amend the paragraph beginning at page 11, line 5, as follows:

The ~~present invention overcomes~~ inventors overcame these and other drawbacks of the prior art arrangements.

Please amend the paragraph beginning at page 14, line 18, as follows:

Fig. 3 is a schematic process flow diagram illustrating actions and signaling in relation to multiple transmitting nodes and a receiving node according to a second preferred example embodiment ~~of the invention~~. The actions and signaling at time instances t_1-t_5 are identical to those described in connection with Fig. 1. At time t_6, however, each one of the transmitting nodes T_1 and T_3 that received a respective packet acknowledgement responds with a forwarding order FO to the receiving node R. At t_7, the receiving node R replies with corresponding forwarding order acknowledgements to the relevant transmitting nodes T_1 and T_3. The forwarding order acknowledgements are preferably aggregated in a single acknowledgement message that is multicasted or broadcasted to the transmitting nodes. A transmitting node that receives an acknowledgement associated with a packet residing in the transmit queue within the node may, if desired, remove the packet from the queue. The whole process is then repeated i) when new data packets are transmitted, and ii) until the information reaches the intended destination.

Please amend the heading beginning at page 21, line 1, as follows:

Example Optimizations

Please delete the heading beginning at page 23, line 12, which starts with:

Discussion

Please amend the paragraph beginning at page 23, line 13, as follows:

In summary, ~~an important aspect of the present invention~~ the technology described concerns the prioritization(s) and exchange of messages allowing MUD to be efficiently incorporated into the framework of for example contention-based protocols, and especially diversity-oriented forwarding protocols such as SDF.

Please delete the heading beginning at page 26, line 1, which starts with:

Implementational aspects

Please amend the paragraph beginning at page 26, line 2, as follows:

Fig. 7 is a schematic block diagram of relevant parts on the receiver side according to an ~~exemplary~~ example embodiment ~~of the invention~~. In particular, the implementation of Fig. 7 is suitable for a relay candidate node customized for operation in a MUD-compatible diversity forwarding protocol. The relay candidate node 100 of Fig. 7 basically comprises a conventional receiver chain 110 connected to an antenna or antenna system, a MUD decoder 120, a receive buffer 130, a packet prioritization unit 140, an acknowledgement unit 150, a conventional encapsulation unit 160, a coder and modulation unit 170, a conventional transmission chain 180 connected to an antenna or antenna system, a transmit buffer 190 as well as a unit 195 for providing multi-hop cost information.

Please amend the paragraph beginning at page 27, line 28, as follows:

Fig. 8 is a schematic block diagram of relevant parts on the transmitter side according to an ~~exemplary~~ example embodiment ~~of the invention~~. In particular, the implementation of Fig. 8 is

suitable for a transmitting node customized for operation in a MUD-compatible diversity forwarding protocol. The transmitting node 200 of Fig. 8 basically comprises a transmit buffer 210, an encapsulation unit 220, a coder and modulation unit 230, a conventional transmission chain 240 connected to an antenna or antenna system, a conventional receiver chain 250, a demodulation and decoder unit 260, a node prioritization unit 270 and a receive buffer 280.